

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
8 January 2004 (08.01.2004)

PCT

(10) International Publication Number
WO 2004/003030 A1

(51) International Patent Classification⁷: C08F 10/00,
4/64, B01J 31/12, 31/18

(21) International Application Number:
PCT/NL2003/000472

(22) International Filing Date: 26 June 2003 (26.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02077590.4 28 June 2002 (28.06.2002) EP
60/419,966 22 October 2002 (22.10.2002) US

(71) Applicants (*for all designated States except US*): DSM IP ASSETS B.V. [NL/NL]; Het Overloon 1, NL-6411 TE Heerlen (NL). SABIC POLYPROPYLENES B.V. [NL/NL]; Poststraat 1, NL-6135 KR Sittard (NL). SABIC POLYETHYLENES B.V. [NL/NL]; Poststraat 1, NL-6135 KR Sittard (NL).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): FRIEDERICHSEN

Nicolaas, Hendrika [NL/NL]; Bodemstraat 2, NL-6443 EE Brunssum (NL). IJPEIJ, Edwin, Gerard [NL/NL]; Vrangendaal 153, NL-6136 JN Sittard (NL). MUELLER, Adrian, Gallus [AT/AT]; Blücherstrasse 17/2, A-6020 Innsbruck (AT). SCHOTTENBERGER, Herwig [AT/AT]; Moos 8, A-6082 Patsch (AT). WANG, Bing [CN/NL]; Groenstraat 109, NL-6162 EP Geleen (NL). WURST, Klaus [AT/AT]; Schrottstrasse 17/7, A-6020 Innsbruck (AT).

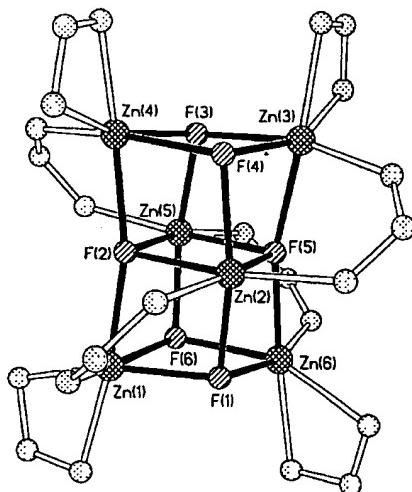
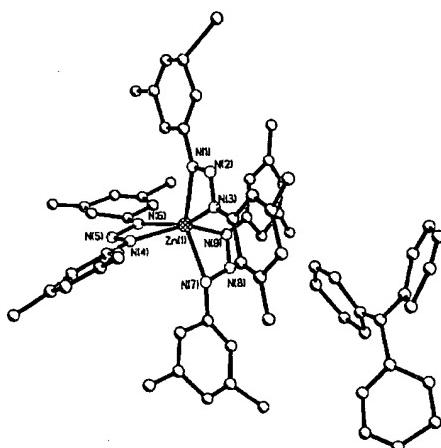
(74) Agent: VERWEIJ, Petronella, Daniëlle; DSM Intellectual Property, P.O. Box 9, NL-6160 MA Geleen (NL).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: CATALYST COMPOSITION FOR OLEFIN POLYMERIZATION



WO 2004/003030 A1

(57) **Abstract:** The invention relates to a catalyst composition comprising a salt of a non- or weakly coordinating anion, said non- or weakly coordinating anion comprising at least one metal or metalloid ion M with valency v+, v representing an integer between 1 and 5, and at least one bidentate ligand coordinating to this metal or metalloid ion, and a catalyst that can be activated by said non- or weakly coordinating anion, characterized in that said bidentate ligand is a bidentate monoanionic ligand of formula (I): $(R^1_q A^1-X-A^2 R^2_r)$, wherein X represents a bridging moiety; A¹ and A² are each independently chosen from the group comprising N, O, P, S, and C; R¹ and R² are each independently chosen from the group comprising an optionally substituted linear or branched (hetero)alkyl group, an optionally substituted (hetero)aryl group, and a Si containing group; and q and r each independently represent an integer with $0 \leq q, r \leq 2$.